

Amendment to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A method for producing a type III antifreeze protein (AFP) which method comprises expressing a nucleic acid sequence encoding the AFP in a fungal host cell ~~which is deficient in protein glycosylation in comparison to a parent strain, a nucleic acid sequence encoding the AFP~~

wherein the fungal host cell is *Saccharomyces cerevisiae*; and is a mutant strain deficient in protein mannosyl transferase 1 (pmt1) and/or protein mannosyl transferase 2 (pmt2);

and wherein the type III AFP has at least 80% amino acid sequence identity homology to with SEQ ID NO: 1 and has increased ice recrystallization inhibitory activity as compared to glycosylated AFP and is characterized by its ice recrystallization inhibitory activity.

Claims 2-5 (canceled)

Claim 6 (currently amended): A method according to claim 1 wherein the host cell yeast is a pmt1-deficient mutant strain.

Claim 7 (currently amended): A method according to claim 1 wherein the host cell yeast is a pmt2-deficient mutant strain.

Claim 8 (canceled)

Claim 9 (canceled)

Claims 10-11 (canceled)

Claim 12 (currently amended): A method according to claim 6 wherein the host cell

yeast is a pmt2-deficient mutant strain.

Claim 13 (canceled)

Claim 14 (currently amended): A method according to claim 1 wherein the type III AFP has at least 90% amino acid sequence identity homology to ~~with~~ SEQ ID NO: 1.

Claim 15 (currently amended): A method according to claim 1 wherein the type III AFP has at least 95% amino acid sequence identity homology to ~~with~~ SEQ ID NO: 1.

Claim 16 (currently amended): A method according to claim 1 wherein the type III AFP comprises the amino acid sequence as set forth in SEQ ID NO: 1.

Claims 17-18 (canceled)

Claim 19 (new): A method for producing a type III HPLC-12 antifreeze protein (AFP) and functional equivalents thereof comprising expressing a nucleic acid sequence encoding the type III HPLC-12 AFP and functional equivalents thereof having at least 80% amino acid sequence identity with SEQ ID NO: 1 in a *Saccharomyces cerevisiae* host cell which is a mutant strain deficient in pmt1 and/or pmt2, wherein the expressed AFP has increased ice recrystallization inhibitory activity in comparison to glycosylated AFP.